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Proposed Maximum Residue Limit PMRL2016-25

Pyraflufen-ethyl

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Under the authority of the *Pest Control Products Act*, Health Canada's Pest Management Regulatory Agency (PMRA) has concluded that the addition of new uses on various commodities to the product labels of PYRO Herbicide, and the new end-use products BlackHawk Herbicide (a coformulation of technical grade pyraflufen-ethyl and 2,4-D [(2,4-dichloro phenoxy)acetic acid] present as the 2-ethylhexyl ester) and GoldWing Herbicide (a coformulation of technical grade pyraflufen-ethyl and MCPA present as the 2-ethyhexyl ester), is acceptable. The specific uses approved in Canada are detailed on the labels of PYRO Herbicide, BlackHawk Herbicide and GoldWing Herbicide, *Pest Control Products Act* Registration Number 31258, 32111 and 32112, respectively.

The evaluation of this pyraflufen-ethyl application indicated that the end-use product has value and the human health and environmental risks associated with the new uses are acceptable.

Before registering a pesticide for food use in Canada, the PMRA must determine the quantity of residues that are likely to remain in or on the food when the pesticide is used according to label directions and that such residues will not be a concern to human health. This quantity is then legally established as a maximum residue limit (MRL). An MRL applies to the identified raw agricultural food commodity as well as to any processed food product that contains it, except where separate MRLs are specified for the raw agricultural commodity and a processed product made from it.

Consultation on the proposed MRLs for pyraflufen-ethyl is being conducted via this document (see Next Steps, the last section of this document). A summary of the field trial data used to support the proposed MRLs can be found in Appendix I.

The currently established MRLs for 2,4-D of 0.05 ppm in/on field corn and of 0.02 ppm in/on dry soybeans; and the currently established MRLs for MCPA of 0.01 ppm in/on field corn; 0.1 ppm in/on dry field peas, edible-podded peas, succulent shelled peas; 0.04 ppm in/on wheat bran; 0.03 ppm in/on barley, oats, rye and wheat; and 0.015 ppm in/on sweet corn kernels plus cob with husks removed are sufficient to cover residues resulting from this new use and are therefore unaffected by this MRL action.

To comply with Canada's international trade obligations, consultation on the proposed MRLs is also being conducted internationally by notifying the World Trade Organization, as coordinated by the Canada's Notification Authority and Enquiry Point.

The proposed MRLs, to be added to the MRLs already established for pyraflufen-ethyl, are as follows.

Table 1 Proposed Maximum Residue Limits for Pyraflufen-ethyl

Common Name	Residue Definition	MRL (ppm)[1]	Food Commodity
Pyraflufen-ethyl	Ethyl 2-[2-chloro-5-[4-chloro-5-(difluoromethoxy)-1-methyl-1*H*-pyrazol-3-yl]-4-fluorophenoxy]acetate and metabolite acetic acid, 2-[2-chloro-5-[4-chloro-5-(difluoromethoxy)-1-methyl-1*H*-pyrazol-3-yl]-4-fluorophenoxy]-	0.01	Legume vegetables (succulent or dried) (except dry soybeans[2]) (Crop Group 6); cereal grains (except rice, wild rice, wheat[3] and field corn[3]) (Crop Group 15); rapeseed revised (Crop Subgroup 20A)

[1] ppm = parts per million
[2] Dry soybeans are excluded from this MRL action as a 0.01 ppm MRL is already established for the commodity.
[3] Wheat and field corn are excluded from this MRL action as a 0.01 ppm MRL is already established for these commodities.

MRLs are proposed for each commodity included in the listed crop groupings in accordance with the Residue Chemistry Crop Groups webpage in the Pesticides and Pest Management section of Health Canada's website.

MRLs established in Canada may be found using the Maximum Residue Limit Database on the Maximum Residue Limits for Pesticides webpage. The database allows users to search for established MRLs, regulated under the *Pest Control Products Act*, both for pesticides or for food commodities.

International Situation and Trade Implications

MRLs may vary from one country to another for a number of reasons, including differences in pesticide use patterns and the locations of the crop field trials used to generate residue chemistry data.

Currently, there are no American tolerances listed for pyraflufen-ethyl on the food commodities being proposed for Canadian MRLs. American tolerances are listed in the Electronic Code of Federal Regulations, 40 CFR Part 180, by pesticide. Currently, there are no Codex MRLs[1] listed for pyraflufen-ethyl in or on any commodity on the Codex Alimentarius Pesticide Residues in Food website.

[1] The Codex Alimentarius Commission is an international organization under the auspices of the United Nations that develops international food standards, including MRLs.

Next Steps

The PMRA invites the public to submit written comments on the proposed MRLs for pyraflufen-ethyl up to 75 days from the date of publication of this document. Please forward your comments to Publications (see the contact information on the cover page of this document). The PMRA will consider all comments received before making a final decision on the proposed MRLs. Comments received will be addressed in a separate document linked to this PMRL. The established MRLs will be legally in effect as of the date that they are entered into the MRL Database.

Appendix I

Summary of Field Trial Data Used to Support the Proposed Maximum Residue Limits

Residue data for pyraflufen-ethyl in dry and succulent peas and beans, soybeans, wheat, barley, corn (field and sweet) and canola were submitted to support the use of PYRO Herbicide, BlackHawk Herbicide and GoldWing Herbicide, containing technical grade pyraflufen-ethyl on Crop Group 6, Crop Group 15 and Crop Subgroup 20A commodities. Previously reviewed residue data from field trials conducted in/on soybeans, field corn and wheat were also reassessed in the framework of this petition. In addition, residue data from studies conducted at exaggerated rates in the treated soybean, corn, barley, wheat and canola were assessed to determine the potential for concentration of residues of pyraflufen-ethyl into processed commodities.

Maximum Residue Limits

The recommendation for maximum residue limits (MRLs) for pyraflufen-ethyl was based upon the submitted field trial data, and the guidance provided in the OECD MRL Calculator. Table A1 summarizes the residue data used to propose MRLs for the indicated crops.

Table A1 Summary of Field Trial and Processing Data Used to Support MRLs

Commodity	Application Method/ Total Application Rate (g a.i./ha)[1]	Preharvest Interval (days)	Lowest Average Field Trial Residues (ppm)	Highest Average Field Trial Residues (ppm)	Experimental Processing Factor
Soybean Seed	Pre-emergent/ 8.6-9.3	129-133	<0.01	<0.01	Quantifiable residues were not observed in soybean seed following treatment at exaggerated application rates.
Podded Succulent Pea		50-61	<0.01	<0.01	Not applicable
Shelled Succulent Pea		59-75	<0.01	<0.01	
Dried Pea		101-112	<0.01	<0.01	
Podded Succulent Bean		55-60	<0.01	<0.01	
Shelled Succulent Bean		70-81	<0.01	<0.01	
Dried Bean		89-112	<0.01	<0.01	

Commodity	Application Method/ Total Application Rate (g a.i./ha)[1]	Preharvest Interval (days)	Lowest Average Field Trial Residues (ppm)	Highest Average Field Trial Residues (ppm)	Experimental Processing Factor
Sweet corn kernels plus cob with husks removed (K+CWHR)	Pre-emergent/ 8.6-9.4	82-94	<0.01	<0.01	Quantifiable residues were not observed in field corn, wheat or barley grain following treatment at exaggerated application rates.
Field Corn Grain		135-164	<0.01	<0.01	
Wheat Grain		97-109	<0.01	<0.01	
Barley Grain		97-116	<0.01	<0.01	
Canola Seed	Pre-emergent/ 8.9-9.2	101-115	<0.01	<0.01	Quantifiable residues were not observed in canola seed following treatment at exaggerated application rates.

[1] g a.i./ha = grams of active ingredient per hectare

Following the review of all available data, MRLs as proposed in Table 1 are recommended to cover combined residues of pyraflufen-ethyl and the E-1 metabolite, expressed as pyraflufen-ethyl equivalents. Residues of pyraflufen-ethyl in these crop commodities at the proposed MRLs will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.